

April 28, 2020

Steven Ingram
208 S. Akard St.
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Dallas, TX 75202

Re: Response to Comments on the 2020 Capitalization Rate Study, Large Telecommunications

Dear Mr. Ingram:

The department would like to thank you for taking the time to review our study and for providing additional information for us to consider. The following information was provided: a Weighted Average Cost of Capital Study for Diversified Communications prepared by Duff & Phelps and additional information requested, a Cost of Capital Study for AT&T ILEC Telephone Operating Property prepared by Hal Heaton, a Cost of Capital Study for AT&T Mobility Operating Property prepared by Hal Heaton, as well as a copy of the slides provided as part of our conference call on April 7, 2020.

One of the main themes of your comments this year was to consider the additional lines of business AT&T now operates in post-acquisition of Time Warner and based on the future plans for the company and how this may impact the selection of guideline companies.

When considering adjustments to the guideline companies used in our study, we thought it would be helpful to first reiterate the purpose of the study.

We develop two studies for the telecommunications industry and segregate the two based on size. In Montana, the telecommunications companies we value for Central Assessment purposes are companies that provide two-way transmission of voice, image, data, or other information over wire, cable, fiber optics, microwave, radio, satellite, or similar facilities.

To reiterate, for a telecommunications company to be centrally assessed in Montana they would need to be providing two-way transmission of voice, image or data. As such this is one of the key criteria, we utilize in selecting our guideline companies. However, we do recognize that the telecommunications industry is going through considerable transition and consolidation and that the issues raised this year were heavily considered and we believe will continue to be an important consideration in future renditions of our studies.

In summary, we determined that Charter Communication, Inc. should be added to our Large Telecommunications Study. However, at this time it is our opinion that the remainder of the requested companies are not comparable enough to be included in the study.

More detail of the analysis conducted, information reviewed, and conclusions reached follows.

Guideline Companies

We were asked to consider the additional lines of business AT&T now operates in after the acquisition of Time Warner Inc. and what impact that may have on the selection of guideline companies.

More specifically it was recommended we include the following additional guideline companies:

Company	Value Line Industry
Apple Inc.	Computer/Peripherals
Amazon.com, Inc.	Internet
Alphabet Inc.	Internet
Charter Communications, Inc.	Cable TV
The Walt Disney Company	Entertainment
Netflix, Inc.	Entertainment

Based on a review of each guideline company's 10-K to determine what business segments each company operates in as well as a review of the fairness opinion conducted in 2017, as a result of AT&T's acquisition of Time Warner, it was determined that Charter Communications, Inc. should be added to the study.

The remaining guideline companies were not determined to be relevant at this time due to little or no involvement in the two-way transmission of voice, image, or data and the minimal contribution from the entertainment/media segment to AT&T's consolidated revenues and earnings. However, as the telecommunications industry continues to evolve and consolidate this will likely become more relevant in the future.

Some of the analysis we completed is discussed in detail below.

Review of Each Guideline Company's Business Segments

Each guideline company's 10-K was reviewed to determine the comparability of each company based on the services and products they provided. Each company's business segments were reviewed as management selects business segments based on the relevance of the various services and products they provided. Based on this review the following conclusions were reached:

AT&T Inc. (T)

AT&T is primarily a telecommunications company. As a result of the acquisition of Time Warner AT&T has indeed expanded their lines of business; however, the WarnerMedia segment that was created to recognize the new line of business makes up about 20% of the company.

Including AT&T as a guideline company in our study recognizes an entertainment/media weighting to the cost of capital and is most clearly demonstrated by the various betas as listed in Value Line.

Comcast Corporation (CMCSA)

Comcast is primarily a Cable company. Comcast Cable which represents the bulk of the company and provides high-speed internet, video, voice, wireless, and security and automation services makes up roughly 50% of revenues and 70% of EBITDA. Comcast's NBCUniversal segment that is made up of cable networks, broadcast television, filmed entertainment, theme parks, and headquarters and other makes up roughly 30% of revenues and 26% of EBITDA.

Including Comcast in the study also recognizes an entertainment/media weighting to the cost of capital again as demonstrated by its higher beta.

Verizon Communications Inc. (VZ)

Verizon is exclusively a telecommunications company providing wireless and wireline services and products. Verizon segregates their business into consumer vs business customers as opposed to segregating segments by differing services or product offerings.

Alphabet

Alphabet is placed in the Internet industry by Value Line. Google is Alphabet's only reportable segment as none of their other segments meet the quantitative thresholds to qualify as reportable segments; therefore, they lump other operating segments into "Other Bets".

The Google segment includes their main revenue generating products such as ads, Android, Chrome, hardware, Google Cloud, Google Maps, Google Play, Search, YouTube as well as their technical infrastructure. Their Other Bets segment is a combination of multiple operating segments that are not individually material and include Access, Calico, CapitalG, GV, Verily, Waymo, and X, among others.

Revenues of the Google segment are primarily from advertising; sales of apps, in-app purchases, digital content products, and hardware; and licensing and service fees, including fees received for Google Cloud offerings and subscription based products. Whereas revenues from Other Bets are derived primarily through the sales of internet and TV services through Access as well as licensing and R&D services through Verily.

Google represents over 99% of the company's revenues and 100% of their income.

It was determined that at this time Google is not comparable to the companies this study would be used to value.

Amazon.com, Inc.

Value Line places Amazon in the Internet industry. Amazon segregates their business segments by region as opposed to products or services. According to their 10-K Amazon serves consumers through their online and physical stores. Customers access their offerings through their websites, mobile apps, Alexa, devices, streaming, and physically visiting their stores. They also manufacture and sell electronic devices, including Kindle, Fire tablet, Fire TV, Echo, Ring, and other devices. They also develop and produce media content.

Almost 65% of the company's net sales in 2019 were from their online and physical stores and almost 12% of their net sales were from third-party and subscription services. Net sales of AWS which includes amounts earned from global sales of computer, storage, database, and other service offerings for start-ups, enterprises, government agencies, and academic institutions makes up about 10% of the company. Finally, less than 5% of the company's net sales are attributable to advertising services and other service offerings.

It was determined that at this time Amazon is not comparable to the companies this study would be used to value.

Apple Inc.

As demonstrated by Value Lines' placement of Apple in the Computers/Peripherals industry, Apple is primarily a products company. 70% of their gross margin comes from the sale of iPhone, Mac, iPad, wearables, home, and accessories. The remaining 30% of the company's gross margin comes from AppleCare, iCloud, licensing, and other services.

It was determined that at this time Apple is not comparable to the companies this study would be used to value.

Charter Communications, Inc.

Charter has one reportable segment, cable services, which clearly identifies it as a cable company. Charter was originally excluded from our study based on size. However, as a result of comments from AT&T and CenturyLink we decided to relax our size threshold, which results in Charter being included in the Large Telecommunications study.

The Walt Disney Company

According to Value Line, Disney primarily operates in the Entertainment industry. Entertainment services make up 90% of their revenues and 100% of their EBITDA.

Although relevant to the 20% of AT&T's lines of business focused on entertainment, including Disney as a guideline company would over-emphasize the entertainment industry in the study. At this time, it was determined Disney is not a comparable guideline company to determine the cost of capital for a telecommunications company.

Netflix, Inc.

Netflix is included in the Entertainment industry by Value Line. According to their 10-K, they operate as one global operating segment and their revenues are primarily derived from monthly membership fees for services related to

streaming content.

Although Netflix may have some value in determining a cost of capital for a company operating in the entertainment industry it was determined they are not comparable enough to be used in our telecommunications study.

Review of the guideline companies selected in Time Warner Inc. Fairness Opinion reported to shareholders on January 9, 2017

As a part of the acquisition of Time Warner by AT&T, Time Warner acquired a fairness opinion to communicate the reasonableness of the proposed transaction price to their shareholders who would be responsible for voting on whether or not to go forward with the deal.

A considerable amount of financial analysis was completed to communicate the potential impact to shareholders as a result of the deal.

Time Warner Inc. was described on page 55 as:

Time Warner, a Delaware corporation, is one of the world's leading providers of media and entertainment services. Time Warner's home page on the Internet is www.timewarner.com. Through its three reportable segments, Turner, Home Box Office and Warner Bros., Time Warner provides digital and premium pay television and streaming services and produces television programs, feature films and videogames.

AT&T Inc. was described as:

AT&T is a holding company incorporated under the laws of the State of Delaware in 1983. AT&T's home page on the Internet is www.att.com. AT&T is a leading provider of communications and digital entertainment services in the United States and the world. The information provided on AT&T's website is not part of this proxy statement and is not incorporated herein by reference.

As part of the fairness opinion public companies were selected for both Time Warner and AT&T. The public companies that were selected to compare Time Warner to were identified on page 75 of the opinion and the companies selected to compare AT&T to were identified on page 77. The companies selected are summarized below (overlapping companies with what has been proposed are in bold):

Time Warner Selected Diversified Entertainment Cos.

- CBS Corporation
- The Walt Disney Company
- Twenty-First Century Fox, Inc.
- Viacom Inc.

AT&T Selected Telecommunications Cos.

- CenturyLink, Inc.
- Sprint Corporation
- T-Mobile US, Inc.
- Verizon Communications Inc.

Time Warner Selected Cable Network/Studio Cos.

- AMC Networks Inc.
- Discovery Communications, Inc.
- Lions Gate Entertainment Corp.
- Scripps Networks Interactive, Inc.

AT&T Selected Cable/Satellite Cos.

- Charter Communications, Inc.
- Comcast Corporation
- Dish Network Corporation

Based on the companies relied upon in the fairness opinion it would appear companies in the Computers/Peripherals industry as well as companies in the Internet industry are not companies an investor would rely upon for developing a cost of capital for the telecommunications industry nor for the now consolidated AT&T company.

Cost of Capital / Capitalization Rate

Several Cost of Capital Studies were also provided for our consideration. The most relevant of which was a study for determining the cost of capital for a Diversified Communications company applicable to valuing a consolidated telecommunications unit, as is done in Montana.

A study was also provided for AT&T ILEC Telephone Operating Property as well as a study for AT&T Mobility Operating Property. The study claims to be used for discounting the after-tax operating cash flows of AT&T

Incumbent Local Exchange Carriers (ILECs) and/or AT&T Mobility for estimating the market value of AT&T ILEC and/or AT&T Mobility operating property for property tax purposes.

As is stated above the department is determining a value for AT&T Inc not the subsidiaries of AT&T. As a result, no additional response is made on behalf of these studies.

As a result of the review of the Diversified Communications Study as well as the review of the guideline company consideration discussed above the following adjustments were made to our study:

1. We changed our screening criteria for size from companies that had a market capitalization over 200 billion to a market capitalization of 100 billion or more, resulting in Charter now being included in the study
 - a. Including Charter resulted in small adjustments throughout the study
2. We also modified the way we portray and weight the Capital Asset Pricing Model (CAPM) in our study.
 - a. We adjusted our study to include a separate Ex Ante and Ex Post CAPM instead of a blended CAPM. Each approach was then pulled through to the summary page and an appropriate weight was given to each approach.

The overall impact to the Yield and Direct Capitalization Rate are demonstrated below:

Description	Before	After
Yield Capitalization Rate (WACC):		
Yield Cost of Equity	7.70%	7.95%
Resulting WACC	5.90%	6.00%
Direct Capitalization Rates:		
Current Yield on Debt	4.15%	4.35%
NOPAT Equity Component	8.15%	8.00%
NOPAT Cap Rate	6.20%	6.20%
GCF Equity Component	15.95%	15.50%
GCF Cap Rate	10.90%	10.70%

Again, I would like to thank you for your comments and the additional information you provided for our consideration. I look forward to any further discussion we may have throughout the 2020 appraisal season.

Our final 2020 Capitalization Rate Study for Large Telecommunications can be found at:

<https://mtrevenue.gov/publications/cap-rate-studies/>

Sincerely,



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